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EXAMINER	
QIN, YIXING	
ART UNIT	**PAPER NUMBER**
2622	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/769,980	SMITH, CRAIG A.	
	Examiner	Art Unit	
	Yixing Qin	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 9-10, 12-19, 21-22, 24-30, and 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshihara (U.S. Patent No. 5,465,163).

1. Claim 1

Regarding claim 1 Yoshihara et al discloses :

- an image reproducing apparatus as the makeup of the first embodiment in Fig. 1 column 3, lines 60-67 and column 4, lines 1-9. The disclosed parts include :
  - a "ROM/RAM" in column 4, lines 1-2, ("**memory**")
  - "a CPU" in column 3, line 67 ("**a processor**")
  - "an operation unit 10 (that) includes a group of keys to be depressed..." in column 4, lines 4-5 ("**a user interface**")

- an "original mount glass" in column 4, line 22 ("**a reproducing surface**"). Inherently, the mount glass would need to have a "**first dimension**," seeing it as a real, three-dimensional object.

- "an image of an original larger than an original which can be read by the image reading unit" in Fig. 6(1) and column 5, lines 32-34. This implies that the large image being copied/scanned has a larger dimension ("**second dimension**") than the dimension of the glass mount ("**first dimension**")

- "...reading divided images a plurality of times by the image reading unit 20" in column 4, lines 15-17. This means that not the whole document is read at one time (" **reproducing occurring in portions of less than the whole document**").

- A "...bit-map memory is an example of a storage means for separately storing read images of an (large original)..." in column 4, lines 54-59. Furthermore, Yoshihara describes a reading process in column 5, lines 35-54, and mentions in lines 53-54, that the "...read images are stored in the bit-map memories 341, 341a, 341b, and 341c..." ("**holding an image of each said document portion in memory**".)

- "...the CPU 50 reduces the four read images, synthesizes the reduced images into one image having the size of A3 paper..." in Fig. 6, column 6, lines 14-15. The image synthesis process reads on "**manipulating said document portions in memory so that said document portions align to form a continuous image**."

- a process to remove overlapped areas in Fig. 6 and column 5, lines 62-67 and column 6, lines 1-24. The idea is that pairs of images (there are four image portions total) are compared for overlapping areas and "superposing end portions of overlapped areas and broken lines corresponding to end portions." (column 6, lines 20-22). This process is used to "**eliminate any duplicative overlapping document portion(s).**"

2. Claim 2

Regarding claim 2, Yoshihara et al discloses :

- in column 6, lines 25-31 that "(w)hen outputting a synthesized image...when the copy key has been depressed...the stored image...is (outputted) onto recording paper by the image output unit 40..." This is the "**printing (of) said continuous image as the output of said image reproducing apparatus**"

3. Claim 3

Regarding claim 3, Yoshihara et al discloses :

- that "...the CPU 50 reduces the four read images... (and) synthesizes the reduced images into one image have the size of A3 recording paper, and stores the synthesized image into the A3 memory," in column 6, lines 14-17. Reducing the images is used to make "**a dimension compatible**" with the printing media. The A3 sized paper is "**print media available to reproducing apparatus**." Storing the reduced image means the image is available "**prior to printing**."

4. Claim 4

Regarding claim 4, Yoshihara et al discloses :

- "...images stored so that parts of the respective divided images are superposed on one another in a state of including the color marker lines M5 and M6" in Figs. 12(2) -12(5) and column 9, lines 53-59. One can see from Figs. 12(2)-12(5) that the marker lines ("**an affixed mark**") is "...**contained within the image of each said document portion stored in memory**."

5. Claim 5

Regarding claim 5, Yoshihara et al discloses :

- a process where the "divided images are connected as one image having the size of A3 recording paper...and a storing operation is completed" in column 10, lines 32-36. The connecting of the images "**form(s) a continuous image in memory**."

Furthermore, in column 10, lines 48-50, Yoshihara discloses that the connected image is formed by "...(connecting) respective divided images by performing pattern matching of color marker portions..." ("**overlays said mark from an image of one portion of said document with the same mark contained in an image of an adjoining portion of said document.**" The entire pattern matching and image synthesis process is explained in column 9, lines 60-67 and column 10, lines 1-33.

6. Claim 6

Regarding claim 6, Yoshihara et al discloses :

- "A color detection circuit 250" used for "recognizing a marker portion by color information" in column 7, lines 29-33. This implies that the "**mark is made with an ink recognizable by said image processing software**."

- in both Figs. 10 and 12, the final images in memory (Fig. 10(5) and Fig. 12(6)) both show a synthesized image that is without the color marker lines (M1, M2, M5, M6). The "**recognized ink mark (is deleted) from the continuous image in memory prior to printing said continuous image.**"

7. Claim 7

Regarding claim 7, Yoshihara et al discloses :

- A color detection circuit 250" used for "recognizing a marker portion by color information" in column 7, lines 29-33. This reads on the "**mark is made in a manner recognizable by said image processing software.**"

- in both Figs. 10 and 12, the final images in memory (Fig. 10(5) and Fig. 12(6)) both show a synthesized image that is without the color marker lines (M1, M2, M5, M6). The "**recognized mark (is deleted) from the continuous image in memory prior to printing said continuous image**."

8. Claim 9

Regarding claim 9, Yoshihara et al discloses :

- a process where the "divided images are connected as one image having the size of A3 recording paper...and a storing operation is completed" incolumn 10, lines 32-36). The connecting of the images **"forms a continuous image in memory."**

Furthermore, in column 10, lines 48-50, Yoshihara discloses that the connected image is formed by "...(connecting) respective divided images by performing pattern matching of color marker portions..." (i.e. "**overlays said recognizable feature contained in an image from one portion of said document with the same recognizable feature contained in an image from an adjoining portion.**") The entire pattern matching and image synthesis process is explained in column 9, lines 60-67 and column 10, lines 1-33.

9. Claim 10

Regarding claim 10, Yoshihara et al discloses :

- in column 9, lines 6-8 that "...respective read images are synthesized by automatically performing rotation and magnification-varying processing (i.e. "**executes automatically without user instruction**")..."

10. Claim 12

Regarding claim 12, Yoshihara et al discloses :

- a process where the "divided images are connected as one image having the size of A3 recording paper...and a storing operation is completed..." in column 10, lines 32-36. The connecting of the images "**form(s) a continuous image in memory.**"

  Furthermore, in column 10, lines 48-50, Yoshihara discloses that the connected image is formed by "...(connecting) respective divided images by performing pattern matching of color marker portions..." (i.e. **"connects said recognizable feature contained in an image from one portion of said document with the same recognizable feature contained in an image from an adjoining portion."**) The entire pattern matching and image synthesis process is explained in column 9, lines 60-67 and column 10, lines 1-33.

11. Claim 13

Regarding claim 13 Yoshihara et al discloses :

- a scanner unit 24 (column 4, line 22) and an image output unit 40 ("printer") (column 6, line 30) in the first embodiment of his invention.

- the makeup of the first embodiment of their invention in Fig. 1 column 3, lines 60-67 and column 4, lines 1-9. The disclosed parts include :
    - a "ROM/RAM" in column 4, lines 1-2 (**"memory"**)
    - "a CPU" in column 3, line 67 (**"a processor"**)
    - "an operation unit 10 (that) includes a group of keys to be depressed..." in column 4, lines 4-8 ("**a user interface**")

- an "original mount glass " in column 4, line 22 ("**a scanning surface**")

- "an image of an original larger than an original which can be read by the image reading unit" in Fig. 6(1) and column 5, lines 32-34. This implies that the large image being copied/scanned has a larger dimension ("**second dimension**") than the dimension of the glass mount ("**first dimension**")

- "...reading divided images a plurality of times by the image reading unit 20" in column 4, lines 15-17. This means that not the whole document is read at one time (i.e." **reproducing occurring in portions of less than the whole document**").

- A "...bit-map memory is an example of a storage means for separately storing read images of an (large original)..." in column 4, lines 54-59. Furthermore, Yoshihara describes a reading process in column 5, lines 35-54, and mentions in lines 53-54, that the "...read images are stored in the bit-map memories 341, 341a, 341b, and 341c..." (i.e. "**holding an image of each said document portion in memory**").

- "...the CPU 50 reduces the four read images, synthesizes the reduced images into one image having the size of A3 paper..." in Fig. 6, column 6, lines 14-15. (i.e. **"manipulating said document portions in memory so that said document portions align to form a continuous image."**)

  The process that Yoshihara et al uses to "eliminate any duplicative overlapping document portion(s)" is described in Fig. 6 and column 5, lines 62-67 and column 6, lines 1-24. The idea is that pairs of images (there are four image portions total) are compared for overlapping areas (column 6, lines 20-22) and the "**superposing end portions of overlapped areas and broken lines corresponding to end portions**" occurs to form a complete image.

12. Claim 14

Regarding claim 14, Yoshihara et al discloses :

- that "...when the copy key has been depressed...the stored image...is (outputted) onto recording paper by the image output unit 40..." in column 6, lines 26-31. (i.e. **"printing said continuous image with a printer incorporated into said electronic device"**)

13. Claim 15

Regarding claim 15, Yoshihara et al discloses :

- that "...the CPU 50 reduces the four read images... (and) synthesizes the reduced images into one image have the size of A3 recording paper, and stores the synthesized image into the A3 memory," in column 6, lines 14-17. Reducing the images is used to make "**a dimension compatible**" with the printing media. The A3 sized paper is "**print media available to reproducing apparatus**." Storing the reduced image means the image is available "**prior to printing**."

14. Claim 16

Regarding claim 16, Yoshihara et al discloses :

- "...images stored so that parts of the respective divided images are superposed on one another in a state of including the color marker lines M5 and M6" in Figs. 12(2) -12(5) and column 9, lines 53-59. One can see from Figs. 12(2)-12(5) that the marker lines ("**an affixed mark**") is "...**contained within the image of each said document portion stored in memory**."

15. Claim 17

Regarding claim 17, Yoshihara et al discloses :

- a process where the "divided images are connected as one image having the size of A3 recording paper...and a storing operation is completed" in column 10, lines 32-36. The connecting of the images "**form(s) a continuous image in memory**."

  Furthermore, in column 10, lines 48-50, Yoshihara discloses that the connected image is formed by "...(connecting) respective divided images by performing pattern matching of color marker portions..." ("**overlays said mark from an image of one portion of said document with the same mark contained in an image of an adjoining portion of said document.**" The entire pattern matching and image synthesis process is explained in column 9, lines 60-67 and column 10, lines 1-33.

16. Claim 18

Regarding claim 18, Yoshihara et al discloses :

- "A color detection circuit 250" used for "recognizing a marker portion by color information" in column 7, lines 29-33. This implies that the "**mark is made with an ink recognizable by said image processing software**."

- in both Figs. 10 and 12, the final images in memory (Fig. 10(5) and Fig. 12(6)) both show a synthesized image that is without the color marker lines (M1, M2,

M5, M6). The "**recognized ink mark (is deleted) from the continuous image in memory prior to printing said continuous image.**"

17. Claim 19

Regarding claim 19, Yoshihara et al discloses :

- "A color detection circuit 250" used for "recognizing a marker portion by color information" in column 7, lines 29-33. This implies that the "**mark is made with an ink recognizable by said image processing software**."

- in both Figs. 10 and 12, the final images in memory (Fig. 10(5) and Fig. 12(6)) both show a synthesized image that is without the color marker lines (M1, M2, M5, M6). The "**recognized ink mark (is deleted) from the continuous image in memory prior to printing said continuous image.**"

18. Claim 21

Regarding claim 21, Yoshihara et al discloses :

- a process where the "divided images are connected as one image having the size of A3 recording paper...and a storing operation is completed..." in column 10, lines 32-36. The connecting of the images "**form(s) a continuous image in memory.**"

Furthermore, in column 10, lines 48-50, Yoshihara discloses that the connected image is formed by "...(connecting) respective divided images by

performing pattern matching of color marker portions..." (i.e. **"connects said recognizable feature contained in an image from one portion of said document with the same recognizable feature contained in an image from an adjoining portion."**) The entire pattern matching and image synthesis process is explained in column 9, lines 60-67 and column 10, lines 1-33.

19. Claim 22

Regarding claim 22, Yoshihara et al discloses :

- in column 9, lines 6-8 that "...respective read images are synthesized by automatically performing rotation and magnification-varying processing (i.e. "**executes automatically without user instruction**")..."

20. Claim 24

Regarding claim 24 Yoshihara et al discloses :

- different "computer systems" in Fig. 1, 14 and 20.

- the makeup of the first embodiment of their invention in Fig. 1 column 3, lines 60-67 and column 4, lines 1-9. The disclosed parts include :
    - a "ROM/RAM" in column 4, lines 1-2 (**"memory"**)
    - "a CPU" in column 3, line 67 (**"a processor"**)
    - "an operation unit 10 (that) includes a group of keys to be depressed..." in column 4, lines 4-8 ("**a user interface**")

- an "original mount glass " in column 4, line 22 ("**a scanning surface**")

- "an image of an original larger than an original which can be read by the image reading unit" in Fig. 6(1) and column 5, lines 32-34. This implies that the large image being copied/scanned has a larger dimension ("**second dimension**") than the dimension of the glass mount ("**first dimension**")

- "...reading divided images a plurality of times by the image reading unit 20" in column 4, lines 15-17. This means that not the whole document is read at one time (i.e." **reproducing occurring in portions of less than the whole document**").

- A "...bit-map memory is an example of a storage means for separately storing read images of an (large original)..." in column 4, lines 54-59. Furthermore, Yoshihara describes a reading process in column 5, lines 35-54, and mentions in lines 53-54, that the "...read images are stored in the bit-map memories 341, 341a, 341b, and 341c..." (i.e. "**holding an image of each said document portion in memory**").

- "...the CPU 50 reduces the four read images, synthesizes the reduced images into one image having the size of A3 paper..." in Fig. 6, column 6, lines 14-15.

(i.e. **"manipulating said document portions in memory so that said document portions align to form a continuous image."**)

The process that Yoshihara et al uses to "eliminate any duplicative overlapping document portion(s)" is described in Fig. 6 and column 5, lines 62-67 and column 6, lines 1-24. The idea is that pairs of images (there are four image portions total) are compared for overlapping areas (column 6, lines 20-22) and the "**superposing end portions of overlapped areas and broken lines corresponding to end portions**" occurs to form a complete image.

21. Claim 25

Regarding claim 25, Yoshihara et al discloses :

- in column 6, lines 25-31 that "(w)hen outputting a synthesized image...when the copy key has been depressed...the stored image...is (outputted) onto recording paper by the image output unit 40..." This is the "**printing (of) said continuous image as the output of said image reproducing apparatus**"

22. Claim 26

Regarding claim 26, Yoshihara et al discloses :

- that "...the CPU 50 reduces the four read images... (and) synthesizes the reduced images into one image have the size of A3 recording paper, and stores the synthesized image into the A3 memory," in column 6, lines 14-17. Reducing the images is used to make "**a dimension compatible**" with the printing media.

The A3 sized paper is "**print media available to reproducing apparatus**."

Storing the reduced image means the image is available "**prior to printing**."

23. Claim 27

Regarding claim 27, Yoshihara et al discloses :

- "...images stored so that parts of the respective divided images are superposed on one another in a state of including the color marker lines M5 and M6" in Figs. 12(2) -12(5) and column 9, lines 53-59. One can see from Figs. 12(2)-12(5) that the marker lines ("**an affixed mark**") is "...**contained within the image of each said document portion stored in memory**."

24. Claim 28

Regarding claim 28, Yoshihara et al discloses :

- a process where the "divided images are connected as one image having the size of A3 recording paper...and a storing operation is completed" in column 10, lines 32-36. The connecting of the images "**form(s) a continuous image in memory**."

Furthermore, in column 10, lines 48-50, Yoshihara discloses that the connected image is formed by "...(connecting) respective divided images by performing pattern matching of color marker portions..." ("**overlays said mark from an image of one portion of said document with the same mark contained in an image of an adjoining portion of said document.**" The entire

pattern matching and image synthesis process is explained in column 9, lines 60-67 and column 10, lines 1-33.

25. Claim 29

Regarding claim 29, Yoshihara et al discloses :

- "A color detection circuit 250" used for "recognizing a marker portion by color information" in column 7, lines 29-33. This implies that the "**mark is made with an ink recognizable by said image processing software**."

- in both Figs. 10 and 12, the final images in memory (Fig. 10(5) and Fig. 12(6)) both show a synthesized image that is without the color marker lines (M1, M2, M5, M6). The "**recognized ink mark (is deleted) from the continuous image in memory prior to printing said continuous image.**"

26. Claim 30

Regarding claim 30, Yoshihara et al discloses :

- "A color detection circuit 250" used for "recognizing a marker portion by color information" in column 7, lines 29-33. This implies that the "**mark is made with an ink recognizable by said image processing software**."

- in both Figs. 10 and 12, the final images in memory (Fig. 10(5) and Fig. 12(6)) both show a synthesized image that is without the color marker lines (M1, M2,

M5, M6). The "**recognized ink mark (is deleted) from the continuous image in memory prior to printing said continuous image.**"

27. Claim 32

Regarding claim 32, Yoshihara et al discloses :

- a process where the "divided images are connected as one image having the size of A3 recording paper...and a storing operation is completed..." in column 10, lines 32-36. The connecting of the images "**form(s) a continuous image in memory.**"

Furthermore, in column 10, lines 48-50, Yoshihara discloses that the connected image is formed by "...(connecting) respective divided images by performing pattern matching of color marker portions..." (i.e. **"connects said recognizable feature contained in an image from one portion of said document with the same recognizable feature contained in an image from an adjoining portion."**) The entire pattern matching and image synthesis process is explained in column 9, lines 60-67 and column 10, lines 1-33.

28. Claim 33

Regarding claim 33, Yoshihara et al discloses :

- in column 9, lines 6-8 that "...respective read images are synthesized by automatically performing rotation and magnification-varying processing (i.e. "**executes automatically without user instruction**")..."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8, 20 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihara (U.S. Patent No. 5,465,163) in view of Cullen (U.S. Patent No. 6,038,349).

29. Claim 8

Regarding claim 8, Yoshihara et al discloses :

- an "operation unit 121 (that) includes a group of keys...and a display unit..." in column 4, lines 4-9. This is essentially a control panel for the user to choose a variety of commands. However, Yoshihara et al does not explicitly disclose that the options are for image manipulation.

The secondary reference, Cullen discloses :

- that a "user (may apply) a user interface including a display (i.e. a "**display unit**") and a pointing device to approximately align the image fragments on the display..." (i.e. "**controls enabling a user to align said images**") in column 2, line 67 and column 3, lines 1-2. Although Cullen does not explicitly state that an

user aligns the image using marks on the image, it is obvious that an user would align images according to some similar features among the partial images.

Both the Yoshihara et al and the Cullen reference are dealing with the manipulation and printing of oversized documents by reading partial images and then combining them to form a smaller version of the oversized document for printing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Cullen's invention's image alignment technique into the operation unit as disclosed by Yoshihara et al. The motivation is to be able to let users customize the desired final image to be printed.

30. Claim 20

Regarding claim 20, Yoshihara et al discloses :

- an "operation unit 121 (that) includes a group of keys...and a display unit..." in column 4, lines 4-9. This is essentially a control panel for the user to choose a variety of commands. However, Yoshihara et al does not explicitly disclose that the options are for image manipulation.

The secondary reference, Cullen discloses :

- that a "user (may apply) a user interface including a display (i.e. a "**display unit**") and a pointing device to approximately align the image fragments on the

display..." (i.e. "**controls enabling a user to align said images**") in column 2, line 67 and column 3, lines 1-2. Although Cullen does not explicitly state that an user aligns the image using marks on the image, it is obvious that an user would align images according to some similar features among the partial images.

Both the Yoshihara et al and the Cullen reference are dealing with the manipulation and printing of oversized documents by reading partial images and then combining them to form a smaller version of the oversized document for printing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Cullen's invention's image alignment technique into the operation unit as disclosed by Yoshihara et al. The motivation is to be able to let users customize the desired final image to be printed.

31. Claim 31

Regarding claim 31, Yoshihara et al discloses :

- an "operation unit 121 (that) includes a group of keys...and a display unit..." in column 4, lines 4-9 This is essentially a control panel for the user to choose a variety of commands. However, Yoshihara et al does not explicitly disclose that the options are for image manipulation.

The secondary reference, Cullen discloses :

- that a "user (may apply) a user interface including a display (i.e. a "**display unit**") and a pointing device to approximately align the image fragments on the display..." (i.e. "**controls enabling a user to align said images**") in column 2, line 67 and column 3, lines 1-2. Although Cullen does not explicitly state that the display displays marks or the user aligns the image using marks on the image, it is obvious that an user would align images according to some similar features among the partial images.

Both the Yoshihara et al and the Cullen reference are dealing with the manipulation and printing of oversized documents by reading partial images and then combining them to form a smaller version of the oversized document for printing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Cullen's invention's image alignment technique into the operation unit as disclosed by Yoshihara et al. The motivation is to be able to let users customize the desired final image to be printed.

Claims 11, 23, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihara (U.S. Patent No. 5,465,163) in view of Cullen (U.S. Patent No. 6,038,349).

32. Claim 11

Regarding claim 11, Yoshihara discloses:

- in column 4, lines 4-5, that "...[t]he operation unit 10 includes a group of keys to be depressed..."

The operation unit can be seen as an **"user interface."** However, Yoshihara does not explicitly disclose that there is a display component. Yoshihara also does not disclose a means for displaying a contiguous image for the user to verify.

The secondary reference, Cullen, discloses :

- that a "...user preferably employs a user interface to approximately align the image fragments to one another to recreate the original image. The user makes use of, for example, mouse 38 or touch screen 40 to manipulate the images. Feedback as to the present position of the image fragments is found on display screen 24" in column 6, lines 50-55.

Although Cullen does not explicitly disclose that a "**contiguous image**" is send to the user for verification, Cullen does mention above that an approximation can be achieved.

Since both Yoshihara and Cullen are disclosing techniques for the recreation of oversized documents, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve Yoshihara's invention with a user display that allowed a user to carefully and precisely align partial images to form a contiguous image

that can be see on the display screen. The motivation would be to allow the user to customize the final product to be printed and allow the user to preview the final image on a display.

33. Claim 23

Regarding claim 23, Yoshihara discloses:

- in column 4, lines 4-5, that "...[t]he operation unit 10 includes a group of keys to be depressed..."

The operation unit can be seen as an **"user interface."** However, Yoshihara does not explicitly disclose that there is a display component. Yoshihara also does not disclose a means for displaying a contiguous image for the user to verify.

The secondary reference, Cullen, discloses :

- that a "...user preferably employs a user interface to approximately align the image fragments to one another to recreate the original image. The user makes use of, for example, mouse 38 or touch screen 40 to manipulate the images. Feedback as to the present position of the image fragments is found on display screen 24" in column 6, lines 50-55.

Although Cullen does not explicitly disclose that a "**contiguous image**" is send to the user for verification, Cullen does mention above that an approximation can be achieved.

Since both Yoshihara and Cullen are disclosing techniques for the recreation of oversized documents, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve Yoshihara's invention with a user display that allowed a user to carefully and precisely align partial images to form a contiguous image that can be see on the display screen. The motivation would be to allow the user to customize the final product to be printed and allow the user to preview the final image on a display.

34. Claim 34

Regarding claim 34, Yoshihara discloses:

- in column 4, lines 4-5, that "...[t]he operation unit 10 includes a group of keys to be depressed..."

The operation unit can be seen as an **"user interface."** However, Yoshihara does not explicitly disclose that there is a display component. Yoshihara also does not disclose a means for displaying a contiguous image for the user to verify.

The secondary reference, Cullen, discloses :

- that a "...user preferably employs a user interface to approximately align the image fragments to one another to recreate the original image. The user makes use of, for example, mouse 38 or touch screen 40 to manipulate the images. Feedback as to the present position of the image fragments is found on display screen 24" in column 6, lines 50-55.

Although Cullen does not explicitly disclose that a "**contiguous image**" is send to the user for verification, Cullen does mention above that an approximation can be achieved.

Since both Yoshihara and Cullen are disclosing techniques for the recreation of oversized documents, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve Yoshihara's invention with a user display that allowed a user to carefully and precisely align partial images to form a contiguous image that can be see on the display screen. The motivation would be to allow the user to customize the final product to be printed and allow the user to preview the final image on a display.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is 703-306-4142. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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YQ